REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1-6 and 8-18 will be pending. By this amendment, claims 1, 8 and 13 have been amended, and claim 7 has been canceled.

§103 Rejection of Claims 1, 6, and 13

In Section 5 of the Office Action, the Examiner has rejected claims 1, 6, and 13 under 35 U.S.C. §102(e) as being unpatentable over Bruce Schneier's Applied Cryptography (Bruce Schneier, Applied Cryptography, 1996, pp 270-271; hereinafter referred to as "Schneier") in view of Sasaki et al. (U.S. Patent 6,378,071; hereinafter referred to as "Sasaki"). It appears that this rejection was intended to be a rejection under §103(a) (e.g., because of the heading "Claim Rejections – 35 USC §103" on page 2, because Section 4 discusses §103(a), and because the Examiner is using a combination of references, noting that Schneier does not teach a storage means). Accordingly it is respectfully requested that this rejection under §102(e) be withdrawn.

The rejection of claims 1, 6, and 13 presented in Sections 6 and 7 of the Office Action is respectfully traversed below, treating the rejection as a rejection under §103(a).

Regarding claim 1, as shown above, claim 1 has been amended and calls for:

> 1. (Currently Amended) A data processing apparatus comprising:
> encrypting means for encrypting data in units of an encryption block having a predetermined data length;
> processing means for defining a processing block having a data block length of a whole multiple of said predetermined length of said encryption block and for expanding compressed data in units of said predetermined processing block length;
> storage means for storing the encrypted data; and

> control means for writing the encrypted data in said storage means so that the data positioned in the same encryption block is also positioned in the same processing block, said control means reading the data from said storage means in units of the processing block.

Accordingly, in one aspect of claim 1, the processing block length is a multiple of the length of the encrypting block. The processing means expands compressed data in units of the processing block length. Hence, the processing means expands data in units that are a multiple of the length of the encryption block. Furthermore, the control means reads data from the storage means in units of the processing block, and so reads data in units that are a multiple of the encryption block. Therefore, an encryption operation is upon data in unites of the encryption block and two non-encryption operations of the data apparatus (expanding compressed data and reading data) are upon data in units that are a multiple of the length of the encryption block. (See, e.g., the Specification at page 28, line 29 through page 29, line 19, and at page 32, lines 25-29.)

Claim 1 has been amended and the Examiner's arguments presented in rejecting claim 1 in Section 6 of the Office Action do not appear to apply to amended claim 1. It does not appear that these arguments address expanding compressed data in units that are a multiple of the length of the encryption block, as called for in claim 1. In addition, it does not appear that the Examiner's arguments address reading data from the storage means in units that are a multiple of the length of the encryption block, as called for in claim 1.

Accordingly, it does not appear that the Examiner has established how the cited combination of Schneier and Sasaki, as referenced by the Examiner in rejecting claim 1, shows or suggests at least these aspects of amended claim 1, and so it is submitted that the Examiner has not established how the cited combination of Schneier and Sasaki shows or suggests

amended claim 1 as a whole. Claim 6 depends from claim 1, and it is also submitted that the Examiner has not established how the cited combination of Schneier and Sasaki shows or suggests claim 6, through its dependence on claim 1. Similar arguments apply to claim 13.

Based upon the foregoing, it is submitted that claims 1, 6, and 13 are not anticipated by nor rendered obvious by the teachings of Schneier and Sasaki, as presented and referenced by the Examiner. Accordingly, it is submitted that the Examiner's apparent rejection of claims 1, 6, and 13 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 2-3, 14-15, and 18

In Section 8 of the Office Action, the Examiner has rejected claims 2-3, 14-15, and 18 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki, and in further view of Bellovin et al. (U.S. Patent 5,241,599; hereinafter referred to as "Bellovin"). This rejection is respectfully traversed below.

Claims 2 and 3 depend from claim 1. As discussed above, it is submitted that the rejection of claim 1 has been overcome. Therefore, it is respectfully submitted that the rejections of claims 2 and 3 have also been overcome through the dependence of claims 2 and 3 on claim 1.

Claims 14, 15, and 18 depend from claim 13. As discussed above, it is submitted that the rejection of claim 13 has been overcome. Therefore, it is respectfully submitted that the rejections of claims 14, 15, and 18 have also been overcome through the dependence of claims 14, 15, and 18 on claim 13.

Based upon the foregoing, it is submitted that claims 2-3, 14-15, and 18 are not anticipated by nor rendered obvious by the teachings of Schneier, Sasaki, and Bellovin, as

presented and referenced by the Examiner. Accordingly, it is submitted that the Examiner's rejection of claims 2-3, 14-15, and 18 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 4 and 16

In Section 11 of the Office Action, the Examiner has rejected claims 4 and 16 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki and Bellovin, and further in view of Cassagnol (U.S. Patent 6,385,727; hereinafter referred to as "Cassagnol"). This rejection is respectfully traversed below.

Claim 4 depends from claim 1. As discussed above, it is submitted that the rejection of claim 1 has been overcome. Therefore, it is respectfully submitted that the rejection of claim 4 has also been overcome through the dependence of claim 4 on claim 1.

Claim 16 depends from claim 13. As discussed above, it is submitted that the rejection of claim 13 has been overcome. Therefore, it is respectfully submitted that the rejection of claim 16 has also been overcome through the dependence of claim 16 on claim 13.

Based upon the foregoing, it is submitted that claims 4 and 16 are not anticipated by nor rendered obvious by the teachings of Schneier, Sasaki, Bellovin, and Cassagnol, as presented and referenced by the Examiner. Accordingly, it is submitted that the Examiner's rejection of claims 4 and 16 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 5 and 17

In Section 12 of the Office Action, the Examiner has rejected claims 5 and 17 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki, Bellovin, Cassagnol, and further in view of Yuenyongsgool (U.S. Patent 6,202,152; hereinafter referred to as "Yuenyongsgool"). This rejection is respectfully traversed below.

Claim 5 depends from claim 1. As discussed above, it is submitted that the rejection of claim 1 has been overcome. Therefore, it is respectfully submitted that the rejection of claim 5 has also been overcome through the dependence of claim 5 on claim 1.

Claim 17 depends from claim 13. As discussed above, it is submitted that the rejection of claim 13 has been overcome. Therefore, it is respectfully submitted that the rejection of claim 17 has also been overcome through the dependence of claim 17 on claim 13.

Furthermore, in claim 5, the control means "stores said one or more processing blocks at consecutive addresses of said storage means in the order of encryption, stores said one or more encryption blocks in said processing blocks at consecutive addresses of said storage means in the order of encryption, and stores said initial values at an address immediately prior to the address of at which the first encryption block in the cluster is stored." (Emphasis added.) In Section 12, the Examiner argues that Yuenyongsgool shows storing blocks at consecutive addresses, but the Examiner does not appear to address how the references show storing blocks at consecutive addresses in the order of encryption as called for in claim 5. Therefore, it does not appear that the Examiner has addressed how the cited combination of references shows claim 5 as a whole. Similar arguments apply to claim 17.

Based upon the foregoing, it is submitted that claims 5 and 17 are not anticipated by nor rendered obvious by the teachings of Schneier, Sasaki, Bellovin, Cassagnol, and Yuenyongsgool,

as presented and referenced by the Examiner. Accordingly, it is submitted that the Examiner's rejection of claims 5 and 17 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 7

In Section 13 of the Office Action, the Examiner has rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki, and in further view of Grabon et al. (U.S. Patent 5,943,421; hereinafter referred to as "Grabon"). Claim 7 has been canceled, thereby obviating the rejection thereof. Accordingly, it is respectfully requested that this rejection be withdrawn.

§103 Rejection of Claim 8

In Section 14 of the Office Action, the Examiner has rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki and Bahout et al. (U.S. Patent 5,594,793; hereinafter referred to as "Bahout"). This rejection is respectfully traversed below.

Regarding claim 8, as shown above, claim 8 has been amended and calls for:

> 8. (Currently Amended) A data processing system for inputting and outputting data while performing mutual identification between a storage apparatus and a data processing apparatus, said storage apparatus comprising:
>
> first mutual identification processing means for performing processing for mutual identification with said data processing apparatus;
>
> storage means for storing said data; and
>
> first control means for allowing the input and output of data between said data processing apparatus and said storage means when said data processing apparatus is recognized to be a legitimate party by the processing for mutual identification;
>
> said data processing apparatus comprising:

> second mutual identification processing means for performing processing for mutual identification with said storage apparatus;
>
> encrypting means for encrypting data in units of an encryption block of a predetermined data length;
>
> processing means for defining a processing block having a data block length that is a whole multiple of the predetermined data length of the encryption block and for expanding compressed data in units of said predetermined processing block length; and
>
> second control means for performing at least one of write processing and read processing when said data processing apparatus is recognized to be a legitimate party by the processing for mutual identification, for writing the encrypted data in said storage means so that data positioned in one encryption block is also positioned in the same processing block during write processing, and for reading the data from said storage means in units of a processing block during read processing.

Accordingly, similar to the discussion of claim 1 above, in one aspect of claim 8, the processing block length is a multiple of the length of the encrypting block. The processing means expands compressed data in units of the processing block length. Hence, the processing means expands data in units that are a multiple of the length of the encryption block. Furthermore, the control means reads data from the storage means in units of the processing block, and so reads data in units that are a multiple of the encryption block. Therefore, an encryption operation is upon data in unites of the encryption block and two non-encryption operations of the data apparatus (expanding compressed data and reading data) are upon data in units that are a multiple of the length of the encryption block. (See, e.g., the Specification at page 28, line 29 through page 29, line 19, and at page 32, lines 25-29.)

Claim 8 has been amended and the Examiner's arguments presented in rejecting claim 8 in Section 14 of the Office Action do not appear to apply to amended claim 8. It does not appear that these arguments address expanding compressed data in units that are a multiple of the length of the encryption block, as called for in claim 8. In addition, it does not appear that the

Examiner's arguments address reading data from the storage means in units that are a multiple of the length of the encryption block, as called for in claim 8.

Accordingly, it does not appear that the Examiner has established how the cited combination of Schneier, Sasaki, and Bahout, as referenced by the Examiner in rejecting claim 8, shows or suggests at least these aspects of amended claim 8, and so it is submitted that the Examiner has not established how the cited combination of Schneier, Sasaki, and Bahout shows or suggests amended claim 8 as a whole.

Based upon the foregoing, it is submitted that claim 8 is not anticipated by nor rendered obvious by the teachings of Schneier, Sasaki, and Bahout, as presented and referenced by the Examiner. Accordingly, it is submitted that the Examiner's rejection of claim 8 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 9 and 10

In Section 15 of the Office Action, the Examiner has rejected claims 9 and 10 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki and Bahout, and further in view of Bellovin. This rejection is respectfully traversed below.

Claims 9 and 10 depend from claim 8. As discussed above, it is submitted that the rejection of claim 8 has been overcome. Therefore, it is respectfully submitted that the rejection of claims 9 and 10 has also been overcome through the dependence of claims 9 and 10 on claim 8.

Based upon the foregoing, it is submitted that claims 9 and 10 are not anticipated by nor rendered obvious by the teachings of Schneier, Sasaki, Bahout, and Bellovin, as presented and

referenced by the Examiner. Accordingly, it is submitted that the Examiner's rejection of claims 9 and 10 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 11

In Section 18 of the Office Action, the Examiner has rejected claim 11 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki, Bahout, and Bellovin, and further in view of Cassagnol. This rejection is respectfully traversed below.

Claim 11 depends from claim 8. As discussed above, it is submitted that the rejection of claim 8 has been overcome. Therefore, it is respectfully submitted that the rejection of claim 11 has also been overcome through the dependence of claim 11 on claim 8.

Based upon the foregoing, it is submitted that claim 11 is not anticipated by nor rendered obvious by the teachings of Schneier, Sasaki, Bahout, Bellovin, and Cassagnol, as presented and referenced by the Examiner. Accordingly, it is submitted that the Examiner's rejection of claim11 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 12

In Section 19 of the Office Action, the Examiner has rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over Schneier in view of Sasaki, Bahout, Bellovin, Cassagnol, and further in view of Yuenyongsgool. This rejection is respectfully traversed below.

Claim 12 depends from claim 8. As discussed above, it is submitted that the rejection of claim 8 has been overcome. Therefore, it is respectfully submitted that the rejection of claim 12 has also been overcome through the dependence of claim 12 on claim 8.

Furthermore, in claim 12, the second control means "stores said one or more processing blocks at consecutive addresses of said storage means in the order of encryption, stores said one or more encryption blocks in said processing blocks at consecutive addresses of said storage means in the order of encryption, and stores said initial values at an address immediately prior to the address of at which the first encryption block in the cluster is stored." (Emphasis added.) In Section 19, the Examiner argues that Yuenyongsgool shows storing blocks at consecutive addresses, but the Examiner does not appear to address how the references show storing blocks at consecutive addresses in the order of encryption as called for in claim 12. Therefore, it does not appear that the Examiner has addressed how the cited combination of references shows claim 12 as a whole.

Based upon the foregoing, it is submitted that claim 12 is not anticipated by nor rendered obvious by the teachings of Schneier, Sasaki, Bahout, Bellovin, Cassagnol, and Yuenyongsgool, as presented and referenced by the Examiner. Accordingly, it is submitted that the Examiner's rejection of claim 12 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

CONCLUSION

In view of the foregoing, entry of this amendment, and the allowance of this application with claims 1-6 and 8-18 is respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes to these claims, as presented herein, are not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicants' representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP

By: Hans R. Mahr, Reg. No. 46,138 for
William S. Frommer
Reg. No. 25,506
(212) 588-0800